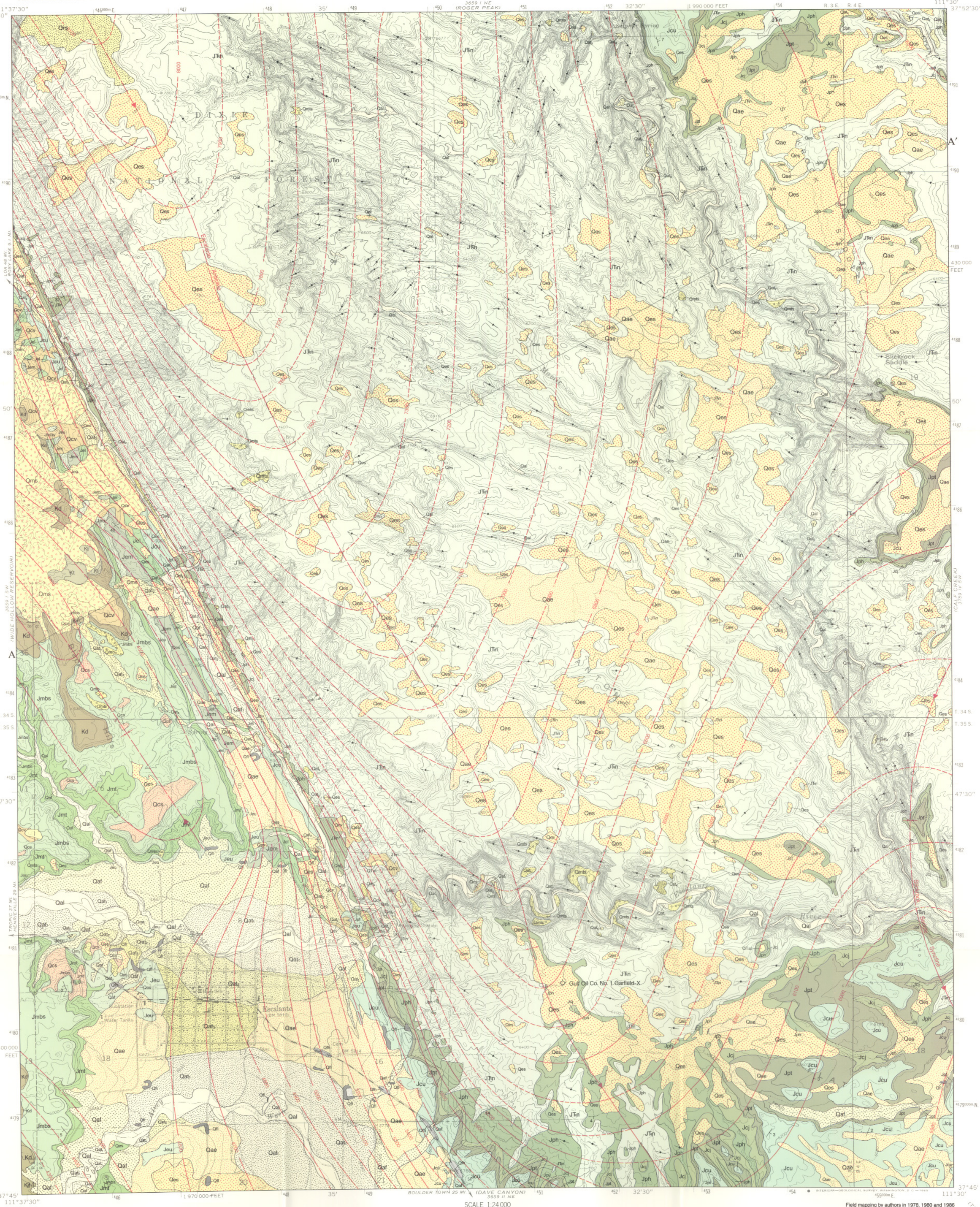
UTAH GEOLOGICAL AND MINERAL SURVEY
UTAH DEPARTMENT OF NATURAL RESOURCES
in cooperation with
THE UNITED STATES GEOLOGICAL SURVEY

Plate 1
Utah Geological and Mineral Survey Map 116
Geologic Map of the Escalante Quadrangle

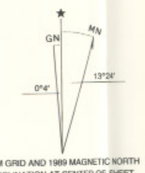


Base map from U.S. Geological Survey,
Escalante Quadrangle 1964

Field mapping by authors in 1978, 1980 and 1986
Kent D. Brown, Patricia H. Speranza, Cartographers

SCALE 1:24 000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL



UTM GRID AND 1989 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

QUADRANGLE LOCATION

GEOLOGIC MAP OF THE ESCALANTE QUADRANGLE, GARFIELD COUNTY, UTAH

by
Van S. Williams, Gordon W. Weir and L. Sue Beard
U.S. Geological Survey

1990

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Plate 2
Utah Geological and Mineral Survey Map 116
Geologic Map of the Escalante Quadrangle

CONTACT — Boundaries of surficial deposits approximately located.

ANTICLINE — Showing trace of axial plane and plunge of axis; dashed where approximately located.

SYNCLINE — Showing trace of axial plane and plunge of axis; dashed where approximately located.

STRIKE AND DIP OF BEDS

Inclined

STRIKE OF VERTICAL AND NEAR-VERTICAL JOINTS

MANGANESE PROSPECT

OIL WELL — Dry hole, showing name of well.

STRUCTURE CONTOURS — Drawn on top of Navajo Sandstone. Long dashed where control less accurate. Short dashed where datum above land surface. Contour interval 100 ft.

DESCRIPTION OF MAP UNITS

Qfh / Qfl — Artificial fill — *Unsorted gravel, sand, and silt used as highway fill (Qfh) and for stock-pond dams and landfills (Qfl).*

Qes — Windblown sand — *Fine grains of quartz and minor silt.*

Qrs — Sandy residuum — *Fine grains of quartz and small fragments of sandstone.*

Qae — Sheetwash alluvium and eolium — *Silt, sand, and small rock fragments.*

Qal — Floodplain alluvium — *Fine sand and silt and local admixtures of gravel.*

Qat$_1$ — Fine-grained terrace alluvium — *Silt, fine sand and minor gravel on terraces 5 to 15 feet above stream level.*

Qcs — Sandstone-boulder colluvium — *Subangular clasts, as much as 10 feet across, of sandstone and chert-pebble conglomerate.*

Qmts — Sandstone talus — *Rockfalls of sandstone below cliffs of the Morrison Formation and Navajo Sandstone.*

Qaf — Fan allluvium — *Silt, sand, and sparse to abundant gravel of local derivation.*

Qcv — Volcanic-boulder colluvium — *Boulders and smaller clasts of basaltic andesite.*

Qmb — Block-slide deposits — *Large slide blocks of sandstone and shale of the Dakota Sandstone.*

Qms — Debris-slide colluvium — *Irregular masses of boulders and smaller clasts of basaltic andesite and at the base irregular masses of shale.*

Qat$_2$ / Qat$_3$ — Low quartzite- and volcanic-gravel terrace alluvium — *Chiefly boulders and cobbles of basaltic andesite and quartzite on terraces about 40 feet (Qat$_2$) and 60 feet (Qat$_3$) above stream level.*

Qat$_4$ / Qat$_5$ — Intermediate volcanic-gravel terrace alluvium — *Chiefly boulders and cobbles of basaltic andesite on terraces about 180 feet (Qat$_4$) and 260 feet (Qat$_5$) above stream level.*

QTatv — High volcanic-gravel terrace alluvium — *Chiefly boulders and cobbles of basaltic andesite or an erosion surface 400 feet or more above stream level.*

UNCONFORMITY

Kt — Tropic Shale — *Dark-greenish-gray shale.*

Kd — Dakota Formation — *Light-brown sandstone, carbonaceous shale and siltstone, and minor coal.*

UNCONFORMITY

Morrison Formation

Jmbs — Brushy Basin and Salt Wash Members, undivided — *Pinkish- and yellowish-gray sandstone and conglomerate and gray, green, brown, and purple mudstone.*

Jmt — Tidwell Member — *Chiefly light-gray sandstone and reddish-brown and green sandstone.*

(Jmbs, Jmt = Jm, cross section)

UNCONFORMITY

Entrada Sandstone

Jeu — Upper member — *Light-gray to pale-orange, fine-grained crossbedded sandstone.*

Jem — Middle member — *Chiefly reddish-brown, thin-bedded silty sandstone and red and gray sandy siltstone and mudstone.*

Jel — Lower member — *Chiefly reddish-brown, crossbedded, fine-grained sandstone and minor mudstone and siltstone.*

(Jeu, Jem, Jel = Je, cross section)

Jcu — Carmel Formation, upper member — *Reddish-brown shale, yellowish-brown fine-grained sandstone, gray micrograined limestone, and gypsum.*

Jpt — Page Sandstone, Thousand Pockets Tongue — *Chiefly yellowish-gray to very light gray, crossbedded, fine- to medium- grained sandstone, commonly contorted.*

Jcj — Carmel Formation, Judd Hollow Tongue — *Chiefly reddish-brown siltstone and fine-grained sandstone; commonly contorted.*

Jph — Page Sandstone, Harris Wash Tongue — *Light-grayish orange, crossbedded, fine-grained sandstone.*

(Jpt, Jcj, Jph = Jpct, cross section)

UNCONFORMITY

JTin — Navajo Sandstone — *Chiefly light-grayish-orange, crossbedded, fine-grained sandstone.*

FORMATION		SYMBOL	THICKNESS (feet)		LITHOLOGY
Surficial deposits		Q	0-200		
High terrace alluvium		QTatv	0-30		
Tropic Shale		Kt	300+		
Dakota Formation		Kd	130-170		
Morrison Formation	Brushy Basin member	Jm (cross section) Jmbs	250-450	0-150	
	Salt Wash member			120-160	
	Tidwell member	Jmt		120-140	
Entrada Sandstone	Upper member	Je (cross section) Jeu	750-1000	200-250	
	Middle member	Jem		300-400	
	Lower member	Jel		250-350	
Carmel Formation	Upper member	Jcu	350-400		
Page	Thousand Pockets Tng.	Jpct (cross section) Jpt	140-180	30-80	
Carmel	Judd Hollow Tongue	Jcj		20-110	
Page	Harris Wash Tongue	Jph		10-50	
Navajo Sandstone		JTin	780+		

CORRELATION OF MAP UNITS

Qal, Qat$_1$, Qaf, Qcv, Qcs, Qmts, Qae, Qrs, Qes, Qfh, Qfl — Holocene

Qat$_2$, Qat$_3$, Qms, Qmb — Pleistocene

Pleistocene and Pliocene (?)

QUATERNARY

QUATERNARY AND TERTIARY (?)

UNCONFORMITY

Kt, Kd — Upper Cretaceous — CRETACEOUS

UNCONFORMITY

Jmbs, Jmt (Jm, cross section) — Upper Jurassic

UNCONFORMITY

Jeu, Jem, Jel (Je, cross section), Jcu, Jpt, Jcj, Jph (Jpct, cross section) — Middle Jurassic — JURASSIC

UNCONFORMITY

JTin — Lower Jurassic and Upper Triassic (?) — JURASSIC AND TRIASSIC (?)